

CLAIMS

1. A copy protection method for a component video signal which is composed of a luminance signal and two color-difference signals, comprising steps of:

on a digital broadcast receiver side, superimposing copy inhibition information upon a first one of the two color-difference signals and superimposing, upon a second one of the color-difference signals, a copy inhibition information superimposition indication signal indicating that the copy inhibition information is superimposed upon the first color-difference signal; and

on a recorder side, when the copy inhibition information superimposition indication signal is detected in the second color-difference signal, analyzing the first color-difference signal and, when the copy inhibition information is detected in the first color-difference signal, carrying out a copy inhibition process without performing recording.

2. A digital broadcast receiver comprising:

a copy guard detection unit for detecting whether input video data is copy inhibited or not; and

an information addition unit for superimposing copy inhibition information upon a first one of two color-difference signals when the copy guard detection unit detects that the input video data is copy inhibited and superimposing, upon a

second one of the color-difference signals, a copy inhibition information superimposition indication signal indicating that the copy inhibition information is superimposed upon the first color-difference signal.

3. The copy protection method of Claim 1 wherein the copy inhibition information is superimposed upon the first color-difference signal and the copy inhibition information superimposition indication signal is superimposed upon the second color-difference signal in field units or in line units.

4. The digital broadcast receiver of Claim 2 wherein when the copy inhibition information is superimposed upon the first color-difference signal and the copy inhibition information superimposition indication signal is superimposed upon the second color-difference signal, the information addition unit performs the superimposition in field units or in line units.

5. The copy protection method of Claim 1 wherein after the copy inhibition information is superimposed upon the first color-difference signal and the copy inhibition information superimposition indication signal is superimposed upon the second color-difference signal, in field units, the superimposed color-difference signal of each field and a color-difference signal of an immediately preceding field are composed.

6. The digital broadcast receiver of Claim 2 comprising:
a color-difference signal composition unit for, after the copy inhibition information is superimposed upon the first color-difference signal and the copy inhibition information superimposition indication signal is superimposed upon the second color-difference signal, in field units, composing the superimposed color-difference signal of a field and a color-difference signal of an immediately preceding field.

7. The copy protection method of Claim 1 wherein
after the copy inhibition information is superimposed upon the first color-difference signal and the copy inhibition information superimposition indication signal is superimposed upon the second color-difference signal, in line units,

the superimposed color-difference signal of each line and a color-difference signal of an immediately preceding line are composed.

8. The digital broadcast receiver of Claim 2 comprising:
a color-difference signal composition unit for, after the copy inhibition information is superimposed upon the first color-difference signal and the copy inhibition information superimposition indication signal is superimposed upon the second color-difference signal, in line units, composing the superimposed color-difference signal of a line and a color-difference signal of an immediately preceding line.

9. The copy protection method of any of Claims 1, 3, 5 and

7 wherein

when the copy inhibition information is superimposed upon the first color-difference signal and the copy inhibition information superimposition indication signal is superimposed upon the second color-difference signal, they are superimposed at irregular intervals.

10. The digital broadcast receiver of any of Claims 2, 4, 6 and 8 comprising:

an additional signal control unit for, when the copy inhibition information is superimposed upon the first color-difference signal and the copy inhibition information superimposition indication signal is superimposed upon the second color-difference signal, performing control for superimposing the same at irregular intervals.

11. A copy protection method for a component video signal which is composed of a luminance signal and two color-difference signals, comprising steps of:

on a digital broadcast transmitting end, inverting a synchronizing signal included in the luminance signal;

on a digital broadcast receiving end, when it is detected that the synchronizing signal is inverted, inverting the synchronizing signal again to obtain the original signal; and

on a recorder end, when it is detected that the synchronizing signal is inverted, carrying out a copy inhibition process without performing recording.

12. A digital broadcast receiver comprising:

a copy guard detection unit for detecting whether input video data is copy inhibited or not; and

a synchronizing signal inversion unit for, when the copy guard detection unit detects that the video data is copy inhibited, inverting a synchronizing signal included in a luminance signal which is to be outputted.

13. A copy protection method for a component video signal which is composed of a luminance signal and two color-difference signals, comprising steps of:

inverting the luminance signal, and superimposing a luminance signal inversion indication signal indicating that the luminance signal is inverted, upon a vertical blanking interval of one or both of the color-difference signals;

on a TV side, when the luminance signal inversion indication signal is detected in the vertical blanking interval of the color-difference signal, inverting the luminance signal again to obtain the original signal; and

on a recorder side, when the luminance signal inversion indication signal is detected in the vertical blanking interval of the color-difference signal, deleting the luminance signal inversion indication signal and recording the inverted luminance signal as it is, or carrying out a copy inhibition process.

14. A digital broadcast receiver comprising:

a copy guard detection unit for detecting whether input video data is copy inhibited or not;

a luminance signal inversion unit for inverting a luminance signal when the copy guard detection unit detects that the video data is copy inhibited; and

an information addition unit for superimposing a luminance signal inversion indication signal indicating that the luminance signal is inverted, upon a vertical blanking interval of a color-difference signal.

15. A copy protection method for a component video signal which is composed of a luminance signal and two color-difference signals, comprising steps of:

inverting the luminance signal, and superimposing a luminance signal inversion indication signal indicating that the luminance signal is inverted, upon a horizontal blanking interval of one or both of the color-difference signals;

on a TV side, when the luminance signal inversion indication signal is detected in the horizontal blanking interval of the color-difference signal, inverting the luminance signal again to obtain the original signal; and

on a recorder side, when the luminance signal inversion indication signal is detected in the horizontal blanking interval of the color-difference signal, deleting the luminance signal inversion indication signal and recording the inverted luminance signal as it is, or carrying out a copy inhibition

process.

16. A digital broadcast receiver comprising:

a copy guard detection unit for detecting whether input video data is copy inhibited or not;

a luminance signal inversion unit for inverting a luminance signal when the copy guard detection unit detects that the video data is copy inhibited; and

an information addition unit for superimposing a luminance signal inversion indication signal indicating that the luminance signal is inverted, upon a horizontal blanking interval of a color-difference signal.

17. A copy protection method for a component video signal which is composed of a luminance signal and two color-difference signals, comprising steps of:

superimposing copy inhibition video which interferes with video, upon a start part or an end part of a video effective period of a field, and delaying or advancing a start position of a normal video signal by the superimposed copy inhibition video;

superimposing, upon a vertical blanking interval of the luminance signal or one or both of the color-difference signals, a copy inhibition video superimposition indication signal indicating that the copy inhibition video is superimposed upon the start part or the end part of the video effective period of the field;

on a TV side, when the copy inhibition video superimposition indication signal is detected, deleting the copy inhibition video and returning the normal video signal to the video effective period of the field; and

on a recorder side, when the copy inhibition video superimposition indication signal is detected, deleting the copy inhibition video superimposition indication signal and recording the video signal, so that when the video signal is reproduced, the copy inhibition video is displayed on an upper part or a lower part of a monitor screen and the normal video is not displayed.

18. A digital broadcast receiver comprising:

a copy guard detection unit for detecting whether input video data is copy inhibited or not;

a copy inhibition video insertion unit for, when the copy guard detection unit detects that the video data is copy inhibited, superimposing copy inhibition video which interferes with video, upon a start part or an end part of a video effective period of a field, and delaying or advancing a start position of a normal video signal by the superimposed copy inhibition video; and

an information addition unit for superimposing, upon a vertical blanking interval of a luminance signal or one of both of color-difference signals, a copy inhibition video superimposition indication signal indicating that the copy

inhibition video is superimposed upon the start part or the end part of the video effective period of the field.

19. A copy protection method for a component video signal which is composed of a luminance signal and two color-difference signals, comprising steps of:

superimposing copy inhibition video upon a start part or an end part of a video effective period of a line, and delaying or advancing a start position of a normal video signal by the superimposed copy inhibition video;

superimposing, upon a vertical blanking interval of the luminance signal or one or both of the color-difference signals, a copy inhibition video superimposition indication signal indicating that the copy inhibition video is superimposed upon the start part or the end part of the video effective period of the line;

on a TV side, when the copy inhibition video superimposition indication signal is detected, deleting the copy inhibition video and returning the original video signal to the video effective period of the line; and

on a recorder side, when the copy inhibition video superimposition indication signal is detected, deleting the copy inhibition video superimposition indication signal and recording the video signal, so that when the video signal is reproduced, the copy inhibition video is displayed on a left part or a right part of a monitor screen and the normal video

is not displayed.

20. A digital broadcast receiver comprising:

a copy guard detection unit for detecting whether input video data is copy inhibited or not;

a copy inhibition video insertion unit for, when the copy guard detection unit detects that the input video data is copy inhibited, superimposing copy inhibition video which interferes with video, upon a start part or an end part of a video effective period of a line, and delaying or advancing a start position of a normal video signal by the superimposed copy inhibition video; and

an information addition unit for superimposing the copy inhibition video superimposition indication signal upon a vertical blanking period of a luminance signal or one or both of color-difference signals.

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